

A2 Two-Row A4 Four-Row Row-Crop Cultivator



JOHN DEERE

OPERATORS MANUAL

**A2 Two-Row A4 Four-Row Row-Crop
Cultivator**

OMN97585N (01SEP61) English

OMN97585 (01SEP61)

LITHO IN U.S.A.
ENGLISH



To the purchaser



This manual contains valuable information about your new John Deere Row-Crop Cultivator. It has been carefully prepared and illustrated. In it, you will find instructions and helpful suggestions for operating, adjusting, attaching, transporting, lubricating, and servicing your new cultivator. You will also find instructions for adapting your cultivator to work properly in all types of field cultivation.

Your new cultivator was built to rigid manufacturing standards. Material and workmanship are the best. Precision production methods,

and accurately controlled heat-treating assure maximum strength and long life for every part.

Keep this manual in a convenient place for quick and easy reference. Study this manual carefully. You have purchased a dependable and sturdy implement, but only by proper care and operation can you expect to receive the service and long life designed and built into it.

Give your cultivator proper attention during slack periods, and by doing this it will always be ready, without delay, when you need it.

Sometime in the future, your cultivator may need new parts to replace those that are worn or broken. If so, go to your John Deere dealer. Provide him with the model number of your cultivator and the date purchased. Record this information in the space provided below, so it will be readily accessible when it is needed.

Location references

Right-hand and left-hand references are determined by standing at the rear of the cultivator and facing in the direction of travel.

JOHN DEERE A2, TWO-ROW AND A4, FOUR-ROW CULTIVATORS

Model of Cultivator.....

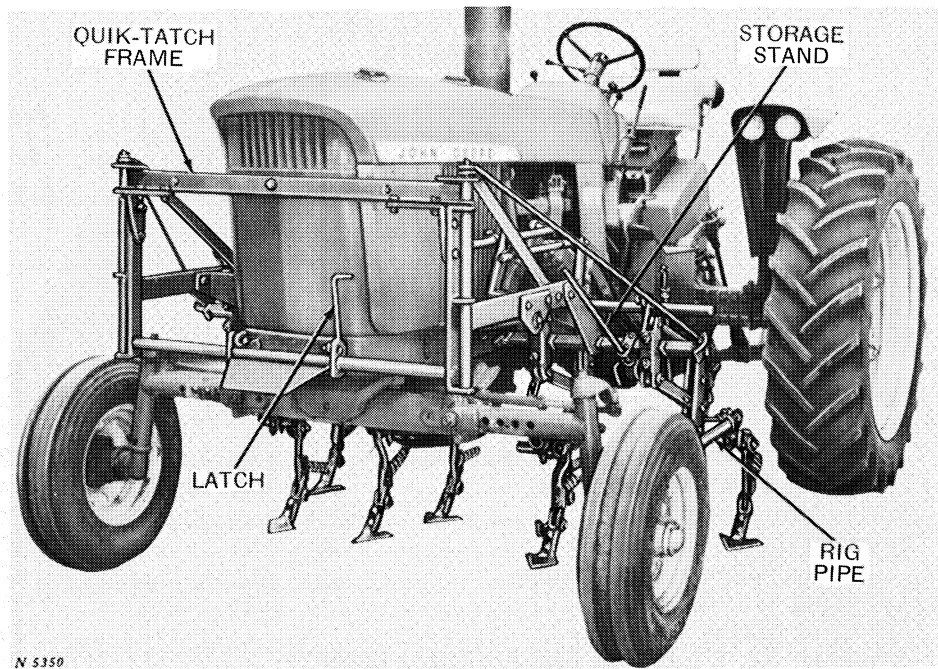
Date Purchased.....19.....

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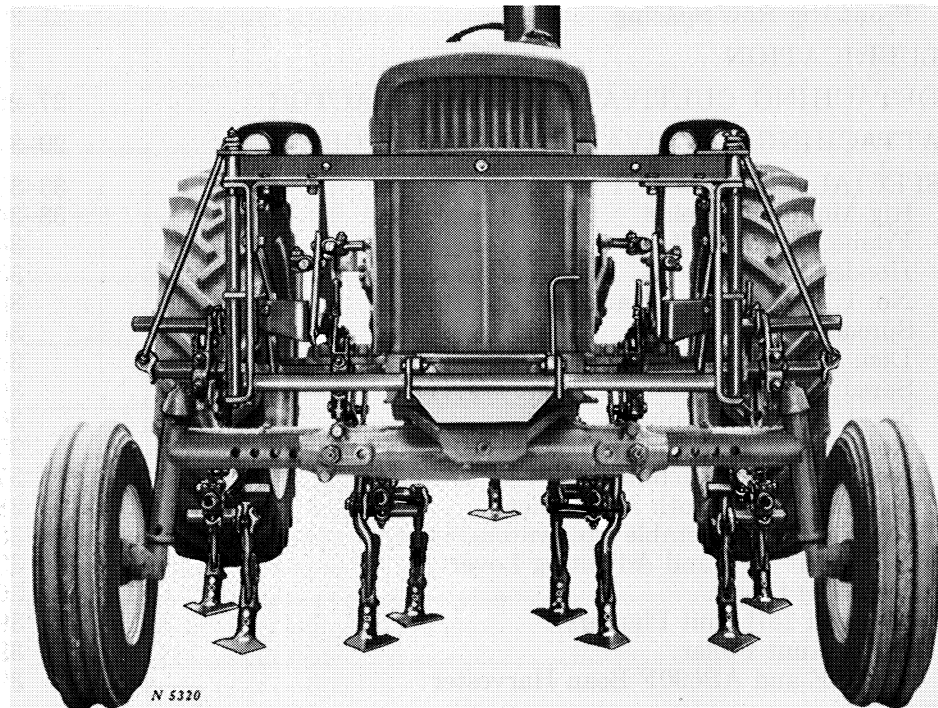
Price \$

Contents

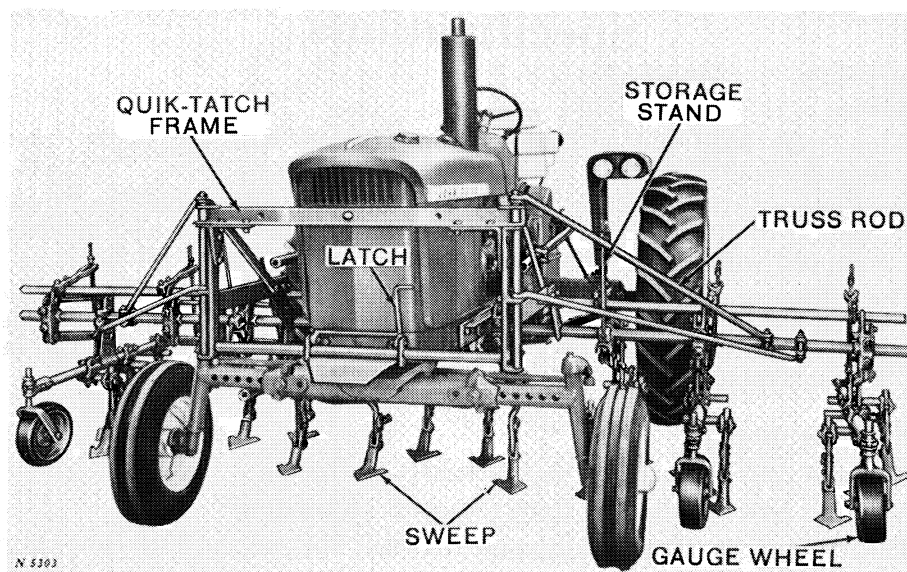
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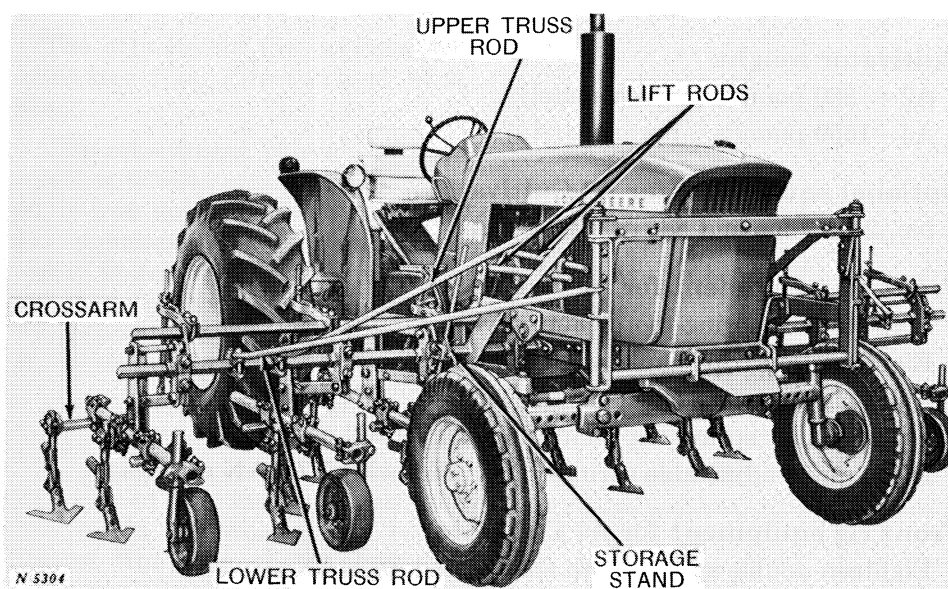
John Deere A2R Cultivator with RE28 shanks and sweeps on 3010 Row-Crop Tractor with adjustable tread front axle



John Deere A2F Cultivator with regular spring-trip shanks and sweeps on 3010 Row-Crop Tractor



John Deere A4R Cultivator with regular spring-trip shanks and sweeps on 3010 Row-Crop Tractor with adjustable tread front axle



John Deere A4F Cultivator with regular spring-trip shanks and sweeps on 3010 Row-Crop Utility Tractor

Specifications

Tractors

John Deere 3010 and 4010 Row-Crop Tractors with adjustable tread front axle.

John Deere 3010 Row-Crop Utility Tractors with adjustable tread front axle (50 to 79 inches) and long wheel base. The tractor also must be equipped with a front-mounted rockshaft and a 3-point hitch.

The cultivator cannot be mounted on the 3010 Row-Crop Utility Tractor which has the short wheel base (81-1/2 inches), a fixed tread front axle (55-1/2 and 61 inches), or a rear muffler and tail pipe for gas, LP, or Diesel Tractors.

Cultivator models

A2R and A4R operated by rear rockshaft on tractor.

A2F and A4F operated by front rockshaft on tractor.

The "F" type is the only cultivator that will work on the 3010 Row-Crop Utility Tractor.

Row spacing

On A4—36 to 42-inch rows (Set 40 inches at factory).

On A2—28 to 42-inch rows (Set 40 inches at factory).

Cultivator weight

A2— 880 pounds (approximately).

A4—1550 pounds (approximately).

Optional equipment for A2 Cultivator

No. 2 lift pipe and adjusting levers.

Front rig equipment for A2 Cultivator

Eight double spring-tooth shanks with Y786AN shovels.

Eight friction-trip shanks with Y786AN shovels.

Eight single spring-tooth shanks with Y722AN shovels.

Eight regular spring-trip shanks with Y786AN shovels.

Eight quick-adjustable spring-trip shanks with Y786AN shovels.

Front rig equipment for A4 Cultivator

Eighteen double spring-tooth shanks and Y786AN shovels.

Eighteen friction-trip shanks and Y786AN shovels.

Eighteen single spring-tooth shanks and Y722AN shovels.

Eighteen regular spring-trip shanks and Y786AN shovels.

Eighteen quick-adjustable spring-trip shanks and Y786AN shovels.

Rear rigs

Tool bar type

50A Series Tool Bar type for 3-point hitch.

NOTE: The 50A Series Rear Rig is the only rear rig that will work with the 3010 Row-Crop Utility Tractor.

With 3-point hitch mounted center rig

110A and 110B Series Parallel Lift Type.

130A and 130B Series Straight Lift Type.

150A Series Offset Beam Type.

With drawbar mounted center rig

120A and 120B Series Parallel Lift Type.

140A and 140B Series Straight Lift Type.

160A Series Offset Beam Type.

A "B" Series or 50A Series Rear Rig is recommended for use when tractor is equipped with cane and rice tires.

Shank equipment for rear rigs

Regular spring-trip shanks.

Quick-adjustable spring-trip shanks.

Single spring-tooth shanks.

Friction-trip shanks.

Double spring-tooth shanks used on 56A Rear Rig only.

Gauge wheels

Castering (Regular on A4 Cultivator).

Rigid (Optional on A4 Cultivator).

Sweeps and shovels

A wide variety of types and sizes available.

Special equipment

No. 1 Center Attachment

No. 21 Spring-Tooth Attachment

No. 1 Knife Attachment

No. 3A Rotary Hoe Attachment

No. 1 Listed Crop Attachment

Spread Arch

Spread Bar

Rig Bar

Disk Hillers

Rear Rig Stop

AB690E and AB690F Bean Harvesters (A2 only)

96E Peanut Puller (A2 only)

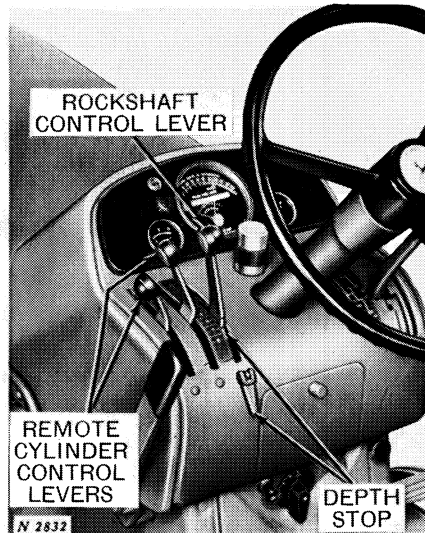
24B and 25B Unit Planters for use with 50A Rear Rig

Shields—frame mounted, rig mounted, hooded

(Specifications and design subject to change without notice.)

Operation

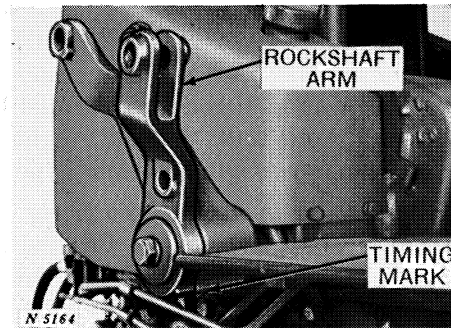
Controls



The A2R and A4R Cultivator is controlled by the rockshaft control lever on the tractor. Push the lever forward to raise the cultivator (both front and rear rigs) and pull it to the rear to lower the cultivator. Use the depth stop to regulate the working depth of the cultivator. See your tractor operator's manual.

On the A2F or A4F Cultivator, the front rigs are controlled by the remote cylinder operating levers. The rear rigs are controlled by the rockshaft control lever. Install hydraulic cylinders and operate the hydraulic controls as instructed in your tractor operator's manual.

Timing rockshaft arm (A2R and A4R Cultivators only)



It is important that the rockshaft arms are properly timed. If the cultivator is equipped with a rear rig and the arms are not timed, the front and rear rigs will not operate at the same depth.

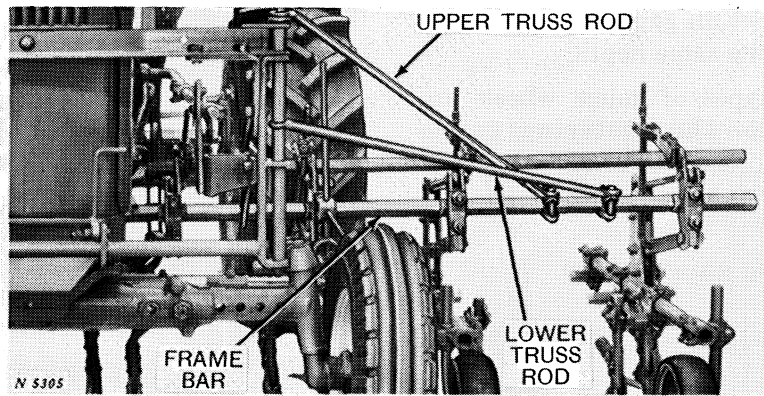
The rockshaft arm is timed properly when the raised mark on the arm is in line with the timing mark on the tractor rockshaft.

Tractor tire inflation

Refer to your tractor operator's manual for operating instructions on tractor tire inflation pressures.

Leveling front frames

A4 Cultivator



Make sure the front frames of the cultivator are level with respect to the tractor. To do this, stand in front of the tractor and sight under the tractor axle and over the frame bar.

To raise the outer end of the frame, move the upper truss rod bracket away from the tractor. To lower the outer end of the frame, move the upper truss rod bracket toward the tractor.

To move the frame forward, move the lower truss rod bracket away from the tractor. To move the frame to the rear, move the lower truss rod bracket toward the tractor.

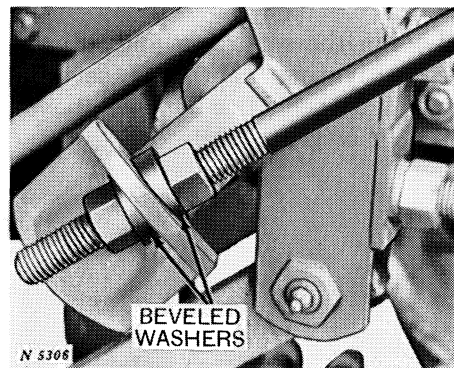
Tighten all nuts on the truss rods securely.

Safety is more than a slogan.

It is an attitude of mind,
and a way of life.

A2 Cultivator

To determine whether or not the front frames of the A2 Cultivator are level with the tractor, stand in front of the tractor and sight under the tractor axle and over the front frame bar.



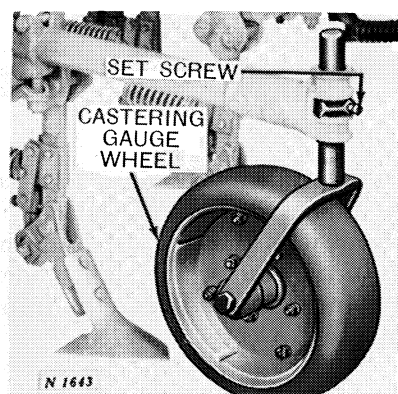
Adjust the hex. nuts on the truss rods until the frame is parallel and level with the tractor axle. Adjust beveling washers so truss rods don't bend.

Gauge wheels on A4 Cultivator

The gauge wheels on the outside rigs determine the depth of the cultivator. Set all gauge wheels to operate at the same depth.

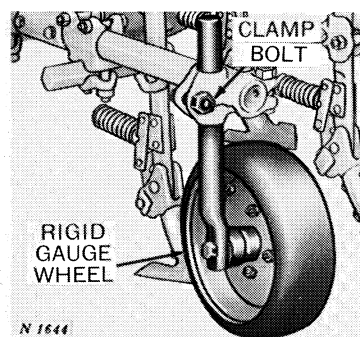
Two types of gauge wheels are available—the casting gauge wheels shown below and the rigid type shown at the right.

Castering gauge wheel



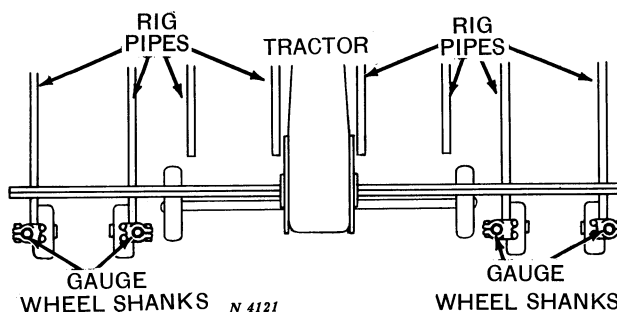
Loosen the set screw and adjust the cultivating depth by setting the gauge wheels 1 to 2 inches above the floor or ground.

Rigid gauge wheel



Adjust the rigid gauge wheel for a working depth of approximately 1 to 2 inches by loosening the clamp bolt and moving the shank to the desired position.

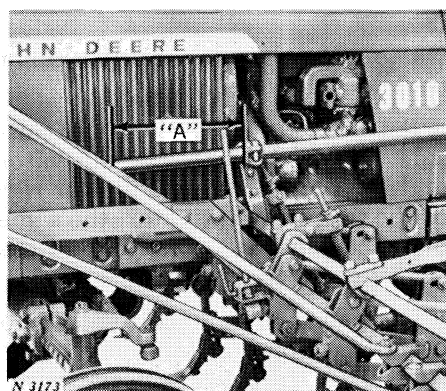
The rigid gauge wheels should be attached so that the wheels are under the rig pipes as shown above and the shanks are positioned to the right and left of the rig pipes as shown below.



Height of lift of front rigs

Adjustments are provided on the lift rods and lift pipes to secure the correct height of lift. Make these various adjustments on the cultivator as shown, if necessary.

Lift pipe on A2R and A4R Cultivators

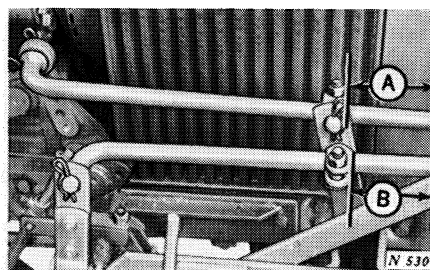


Set the distance "A" from the end of the lift pipe to the clamp, on both sides of the tractor, to 14 inches on the 3010 Tractor and 8 inches when the A2 or A4 Cultivator is on the 4010 Tractor.

See page 18 for instructions for using lift pipe with adjusting lever.



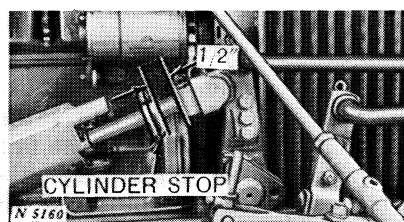
Lift rod on A2F and A4F Cultivators



There are two places where adjustments can be made when using a front-mounted rockshaft.

Set the distance between the end of the rod and the clamp at "A" and "B" according to the chart below.

Tractor	"A"	"B"
3010 Row-Crop	5"	4"
3010 Row-Crop Utility	5"	4"
4010 Row-Crop	6"	2"



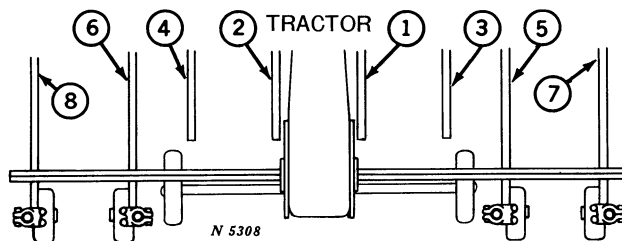
On both tractors, set the hydraulic cylinder stop 1/2-inch from the cylinder yoke for average conditions.

All cultivators

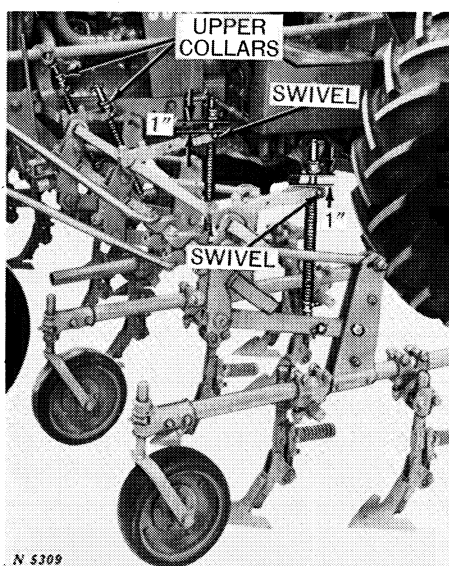
Raise the cultivator slowly for the first time. If the cultivator hits the tractor, or the rig pipes hit the lower rig links, loosen all the upper collars on the rig lift rods and set as described on the next page.

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Adjusting rig lift rods



Rig positions



To check rig lift rod collars for proper setting, raise the cultivator. If raising the cultivator for the first time, raise it slowly making sure the rig pipes do not hit the lower rig links and the shanks do not strike the underside of the tractor.

If the cultivator does hit at either one of these places, loosen all the upper collars on the rig lift rods and continue to raise the cultivator to its fully raised position.

If additional lift is needed and obtainable on the number one and two rigs, lift these two rigs by hand until they come in contact with the

tractor. Then secure the upper collar next to the swivel.

Set the upper collars on the outside rigs of the two-row cultivator and the number three and four rigs of the four-row cultivator, the same distance from the top of rod to the swivel as on the inside rigs.

On the four-row cultivator, to check the upper collars on the rigs controlled by gauge wheels, lower the cultivator until the inside sweeps just touch the floor. The upper collars should be approximately one inch above the swivels.

To re-check this setting, raise the cultivator. If additional lift is desired, lower the two outside upper collars a slight amount.

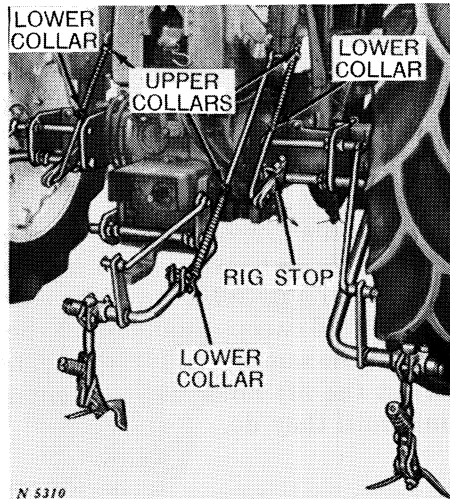
This upper collar setting may be changed in the field, depending upon how deep the cultivator will be operated.

CAUTION: Once these upper collars are set, be careful when changing this setting or the setting of the clamp on the cultivator lift rods or pipes. Changing one or both of these settings could cause the cultivator to damage the tractor when the cultivator is raised or it could cause the cultivator not to raise high enough.

Rear rigs

The rear rigs are operated by the tractor rockshaft and controlled by the rockshaft control lever.

Outer rear rigs and drawbar mounted center rig



120B Series Rear Rig

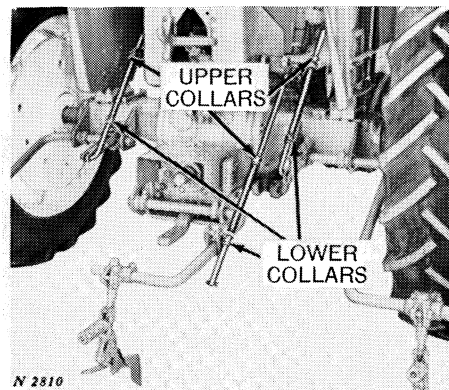
Rig stops

When the rear rigs are equipped with rear rig stops, the height of the outer rigs is limited by these stops. When the rear rigs are fully raised, the stop should come in contact with the rear rig beam.

In raising the rear rig for the first time, raise it slowly. If the stop comes in contact with the rear rig beam before the rear rigs are fully raised, loosen the upper collars and continue to raise the tractor rockshaft as high as possible. Lift the outer rear rigs by hand until the stop comes in contact with the rear rig beam and set the upper collar next to the eyebolt.

If the rig stop does not hit the rear rig beam after the rear rig is fully raised, lift the outer rig by hand until it does and reset the upper collars.

Height of lift and down pressure



140A Series Rear Rigs

The height of lift for rear rigs not equipped with rear rig stops is controlled by the location of the upper collars on the rig lift rods and lower collar on the center rig.

The amount of down pressure on the outer rigs is determined by the location of the lower collars on the lift rods and the upper collar on the center rig. Adjust them to secure the desired penetration of the sweeps.

Depth of cultivation

Depth of cultivation is controlled by the upper collars on the outer rigs and the lower collar on the drawbar mounted center rig. Adjust upper collars on the outer rig and the lower collar on the center rig so all the sweeps touch the floor at the same time.

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Tool bar type rear rig

These instructions apply to the 50A Series Rear Rig and to the 3-point hitch mounted center rig on the other series of rear rigs.

On A2R and A4R Cultivators, the working depth is controlled by the length of the lift links on the 3-point hitch. Check this length after the working depth of the front rigs has been determined. Use the adjusting cranks to lengthen or shorten the lift links so the rear rig will operate at approximately the same depth as the front rigs. Keep the tool bar level.

On A2F and A4F Cultivators, use the adjustable depth stop on the rockshaft control lever to set the working depth.

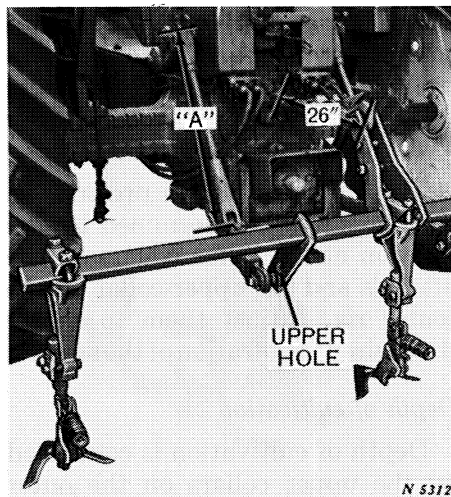
The recommended length for the center link is 26 inches.

The length of the lift links on the 3-point hitch can be changed for leveling if required.

With the 50A, 110B, and 130B Series Rear Rigs, if greater depth of cultivation is required, it is possible to move the center rig attaching pins to the upper set of holes.

Leveling rigs

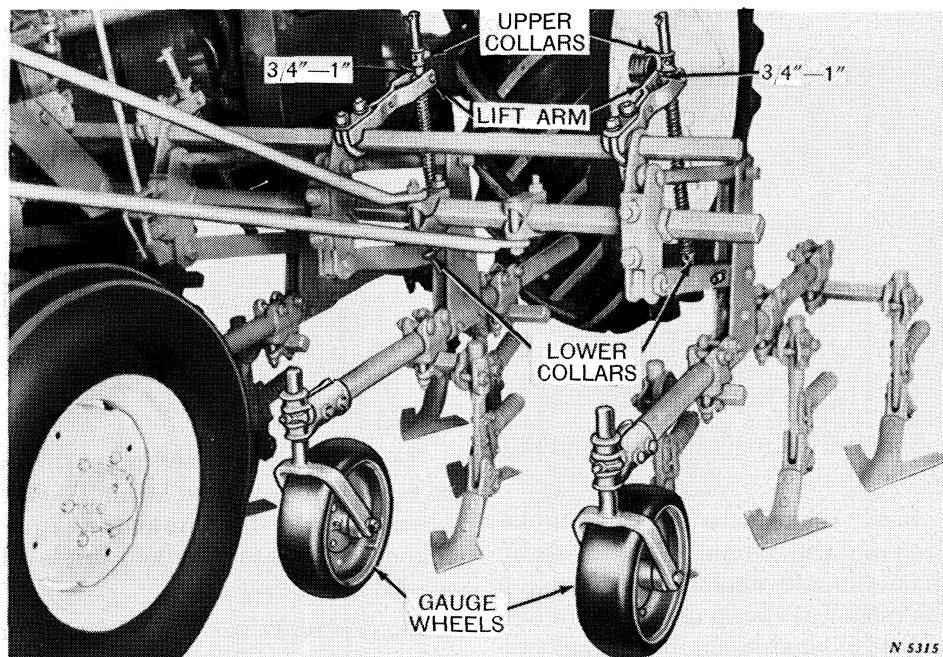
After the upper collars on the outer rear rigs have been checked as explained on page 11, lower the rear rigs. All the sweeps should touch the floor at the same time. If they don't, adjust the lift links and the center link until they do.



On the 3010 Tractors the recommended length "A" for the right- and left-hand links is 26-3/4 inches.

On the 4010 Tractors, the recommended length "A" for the right- and left-hand lift links is 28-1/2 inches.

Flexibility of rigs with gauge wheels



The front rigs of the A4 Cultivator equipped with gauge wheels are designed to “float” with the level of the ground.

When operating in the field, there should be 3/4- to one-inch of space between the upper collars on the rig lift rods and the lift arm. This will allow the rigs to “float.”

After the gauge wheels have been set so the cultivator will cultivate at the desired depth, this 3/4- to one-inch clearance is controlled by the position of the upper collars.

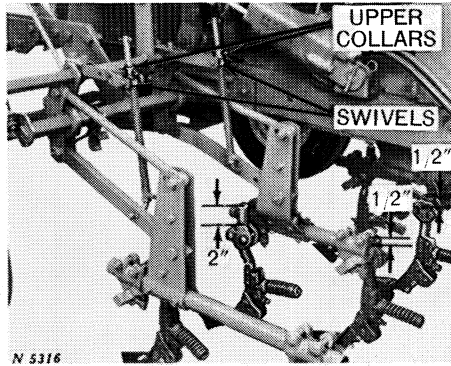
When cultivating in the field, adjust the upper collars so there is the desired clearance.

Adjusting down pressure on front rigs

To increase down pressure on the front rig shovels or sweeps, raise the lower collars on the rig lift rods. This will increase spring tension and force the shovels or sweeps downward. (If no down pressure is desired, loosen the collars and let them slide to the bottom of the rod.)

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Cultivator field adjustments



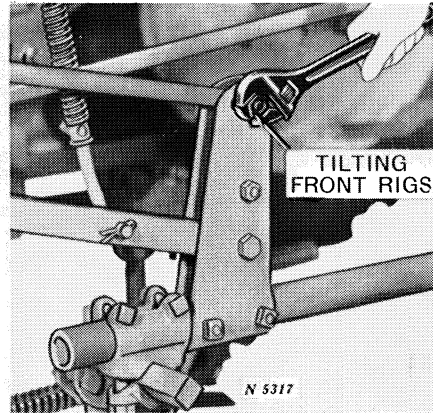
Some adjustment may be required in the field.

First, make sure all the shanks are set the same. The straight shanks should extend 1/2-inch above the crossarm clamp as shown above. The offset shanks should extend two inches above the crossarm clamp.

For additional depth with the four-row cultivator, raise the gauge wheels to the desired setting (page 8). When you change the setting of the gauge wheels, also change the setting of the upper collars on the rig lift rods. The rigs that are controlled by gauge wheels must have the 3/4- to one-inch clearance between the collar and swivel as explained on page 10.

After the cultivator has been set for the proper depth, make sure the depth stop on the cylinder for the A2F and A4F Cultivators is properly set so the cultivator will return to the same depth each time it is lowered. For A2R and A4R Cultivators, set the control stop on the tractor rockshaft control quadrant to control depth of cultivation.

Tilting front rigs

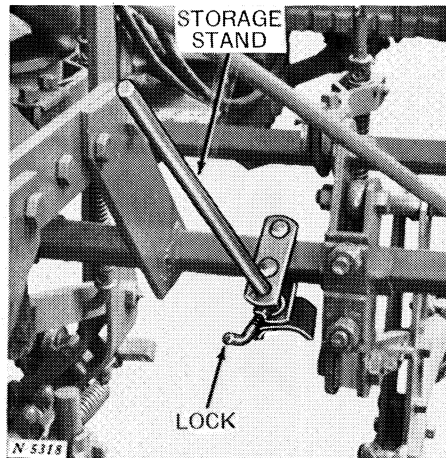


Each rig can be tilted up or down so all rig pipes will be level. The rig pipes should be about 1/4-inch higher in front so they will run level while cultivating.

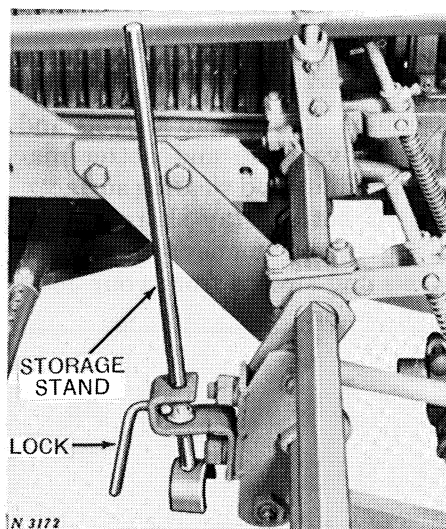
Sight across the rig pipes from the side of the cultivator to see that they are the same height and tilted the same.



Storage stand



A2 Cultivator

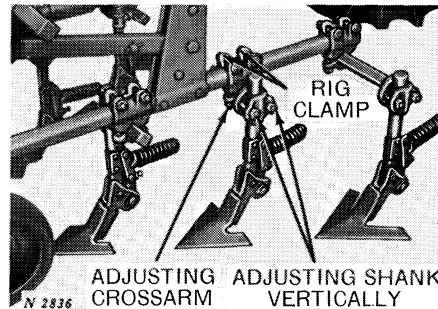


A4 Cultivator

Always make sure the storage stands are locked in the up position as shown above before raising the cultivator. Failure to follow this precaution will mean bent storage stands when the cultivator is raised.

Crossarms, clamps, and shanks

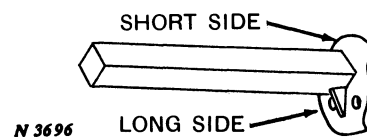
Clamps and shanks



Loosen nuts holding clamp to rig pipe to turn clamp so shank will be perpendicular to ground. Tighten nuts after setting.

Loosen nuts on bolts holding crossarm to move crossarm in or out to meet the crop condition. After setting, tighten nuts. For vertical adjustment, loosen nuts on bolts holding shanks to crossarm and level sweeps so all sweeps penetrate the soil to the same depth.

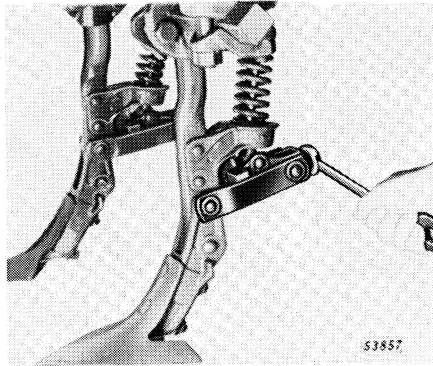
Crossarm



The clamp end of the crossarm is 3/4-inch longer on one side than on the other. The crossarm used with straight shanks should ordinarily be installed so that the longer side of the clamp end is down. Crossarms with offset shanks on the inner front pipes should be installed in the clamp so the longer side of the clamp end is up. On the 3010 Row-Crop Utility Tractors, the crossarms can be set with the longer side up to gain more ground clearance for transporting cultivator.

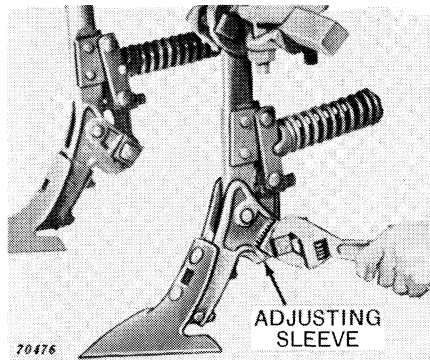
Adjusting tilt of sweeps

Spring-trip shanks



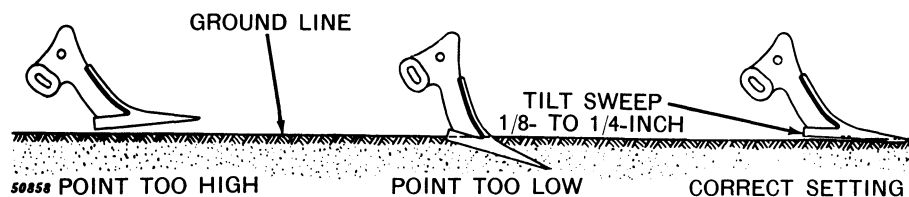
Adjusting Tilt of Quick-Adjustable Spring Trips

When using quick-adjustable spring-trip shanks, adjust bolt to tilt sweep so that it is in correct relationship to the ground as illustrated below.

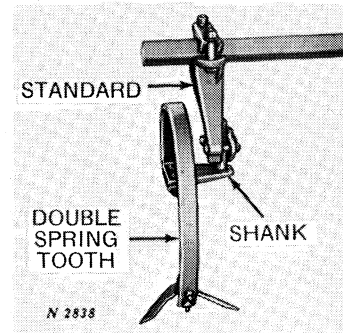


Adjusting Sleeve on Regular Spring-Trip Shanks

When using spring-trip shanks, adjust sleeve to tilt sweep so that it is in correct relationship to ground as illustrated below.



Spring teeth

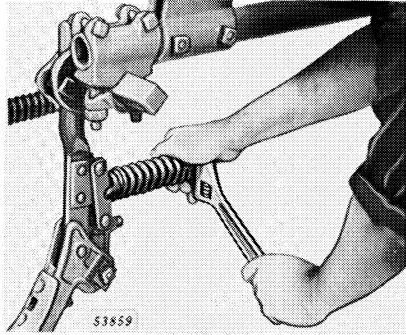


Single or double spring teeth can be used on both front and rear rigs. The teeth can be adjusted horizontally and vertically.

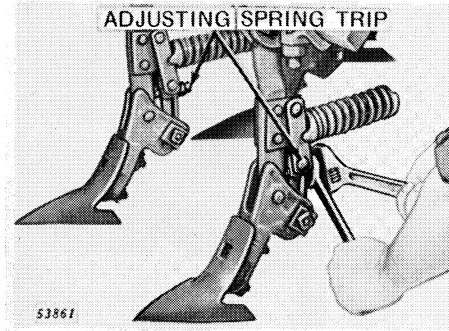
Keep your cultivator a John Deere cultivator

Genuine John Deere shovels and sweeps have more and better material in points and wearing surfaces. They fit better, stay sharp longer, and save you money. Buy your shovels and sweeps from your John Deere dealer.

Adjusting spring-trip



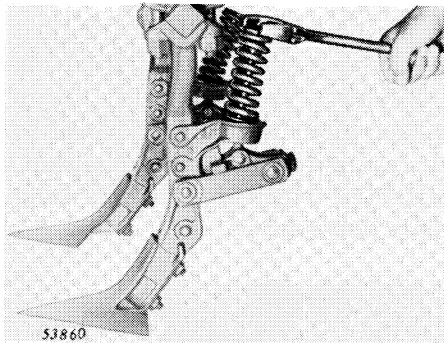
Regular Spring Trip



Adjusting the Spring Trip Set Screw

Additional adjustment, if required, may be obtained with the set screw.

This setting is made at the factory and the adjustment rarely requires changing. One-half turn of the set screw makes a big difference in the action of the trip. To make the trip hold tighter, turn the set screw out; to make the trip release more easily, turn the set screw in.



Quick-Adjusting Spring Trip

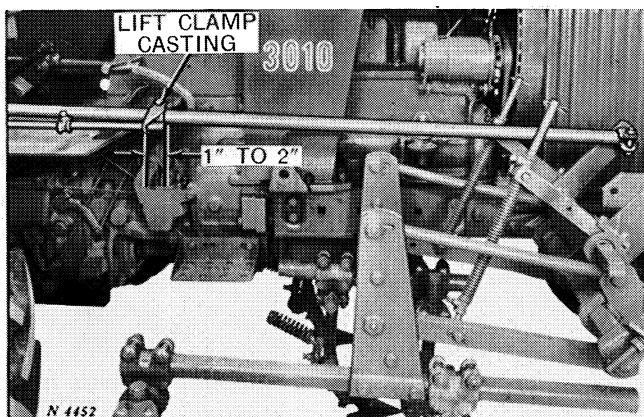
Trip each spring-trip before using cultivator to be sure it functions properly. The tension of the spring-trips may be adjusted at the rear of the spring.

Keeping your equipment in proper adjustment will help to keep it operating efficiently and economically.

BE SAFE

It pays to be careful,
It costs to be careless!

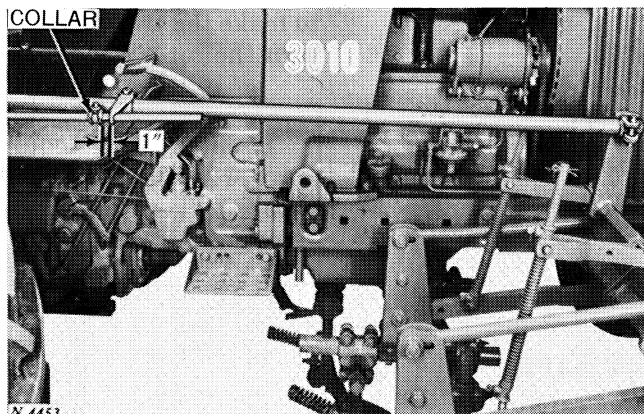
Adjusting No. 2 lift pipe and adjusting lever



These levers give the operator individual control of each side of the cultivator.

When the lift clamp casting is properly set, there should be approximately one to two inches of the rod extending through the cast-

ing as shown above. If not, adjust the clamp casting until this setting is obtained. To set the lift clamp casting, move the hand lift lever to the rear position in the quadrant. Raise the cultivator to its fully raised position.



To properly locate the collar on the lift rod, lower the cultivator. Place the hand lift lever in the middle position of the quadrant. For normal field conditions, set the collar

on the lift rod so it is approximately one inch from the clamp casting on the lift pipe. This setting may vary if additional depth of cultivation or height of lift is desired.

Safety suggestions

The safety of the operator is one of the prime considerations in the minds of John Deere engineers when designing farming equipment. Shielding, simple adjustments, and other safety features are built into machines whenever possible.

However, investigation of thousands of farm accidents shows that careless use of farm machinery causes nearly 1/3 of all farm accidents. You can make your farm a safer place to live and work if you observe the safety suggestions given below. Study these suggestions given below carefully and insist that they be followed by those working with you and for you.

Always stop the tractor and lower all units before lubricating or adjusting the cultivator.

Never ride or allow others to ride on the cultivator or the tractor. The tractor operator should be the only person on the tractor while it is being operated.

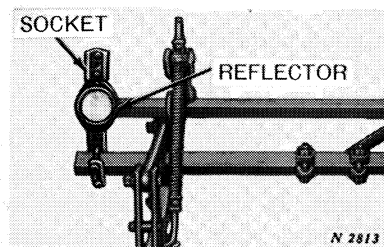
Drive at speeds slow enough to insure your safety. Reduce speed before turning quickly or applying individual brakes. Drive slowly over rough ground.

Be sure that clothing worn by tractor or machine operator is fairly tight and belted. Loose jackets, skirts, shirts, or sleeves should not be permitted because of the danger of getting into moving parts.

All women operators should wear trousers or slacks.

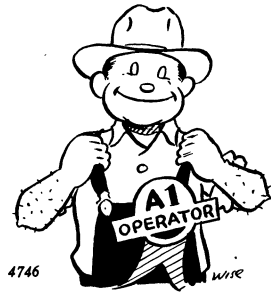
Always keep tractor in gear when going down steep grades.

Keep a firm grip on the steering wheel at all times when the speed is increased.



When transporting the cultivator on a public road at night, or during other periods of low visibility, use a warning lamp in the socket provided on the extreme left-hand side of the four-row cultivator. When transporting during the day, hang a red flag prominently on the extreme left of the cultivator.





Never attempt to clean, oil or adjust a machine while it is in motion

Maintenance suggestions

The following suggestions are recommended to help keep the cultivator in good condition.

Nuts and bolts

To insure trouble-free service, it is important to keep all nuts and bolts tight. If they are allowed to become loose, they may bend, strip threads, or cause parts to be lost. Check all nuts and bolts daily before operation.

It is also important that the pivot studs on the lower rig links be checked periodically and tightened, if needed, to prevent excessive wobble of the rig.

Rigs

Rig hangers should never be allowed to become loose because of wear. They can easily and quickly be tightened. Keep all nuts tight and cotter pins spread.

Shovels and sweeps

The life of shovels and sweeps can be increased and their work made more efficient by greasing the polished faces with a coat of multi-purpose grease or heavy oil during the periods of intermittent use and between seasons.

They will also scour much easier if they are cleaned at the end of each cultivating day.

Sharpening shovels and sweeps

Dull or worn-out shovels or sweeps will not destroy weeds, nor permit an even depth of cultivation. They are expensive to operate. Keep your shovels and sweeps sharp!

Between seasons or during periods of intermittent use, inspect your cultivator for worn or damaged parts. Failure to do this may cause an expensive delay when attempting to put your cultivator back in service.

Storage suggestions

Store the cultivator inside, out of the weather.

Clean the cultivator of all mud, dirt, grease, or other foreign material.

Replace the tractor attaching bolts in the cultivator so you won't have to spend valuable time looking for them when you go to put the cultivator back on the tractor.

Perform all of the maintenance suggestions listed on this page.

Front rig row spacing

The spacing of the front rigs on the A4 Cultivator can be adjusted to handle rows spaced 36 to 42 inches apart. On the A2 Cultivator the rigs can be adjusted for 28- to 42-inch rows. On new cultivators from the factory, the rigs are spaced for 40-inch rows and all rig and shank spacings should agree with the illustrations below and on pages 17 to 19. Spacing on both right-hand and left-hand rigs should be the same. See illustration below and on the next page.

NOTE: On A2F and A4F Cultivators, the dimensions "A" and "B" on pages 17 to 19 will be different than shown on the illustrations.

Dimension "A" will be two inches more than shown. Dimension "B"

will be two inches less than shown.

Setting rig hangers and cross-arm clamps

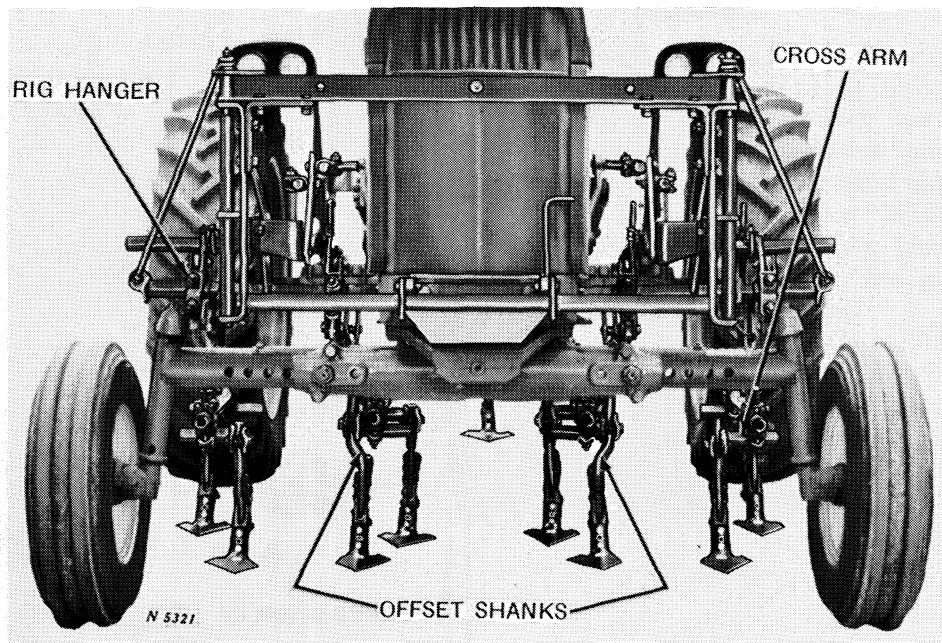
1. To change the rows spacing of the cultivator from the factory setting, first move the rig hangers to the new position.

2. If not already in place, move the front crossarms against the front side of the hanger coupling plate.

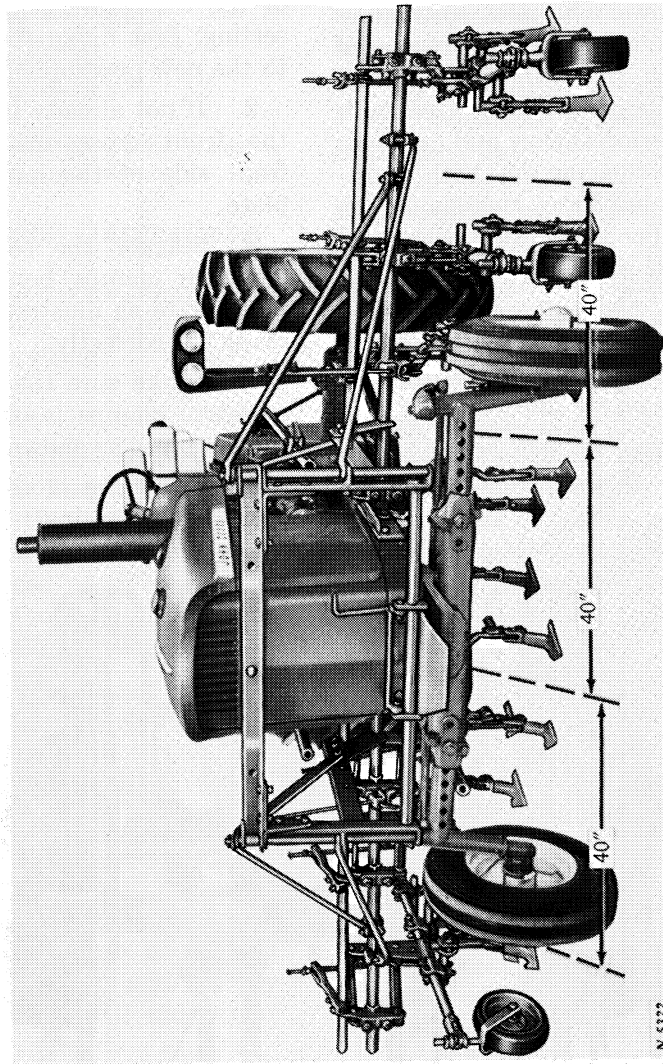
3. Stagger the second row of crossarm clamps behind the coupling plate as illustrated, if not already set correctly.

4. Make sure the third row of crossarm clamps is on the rear of the rig pipes as shown.

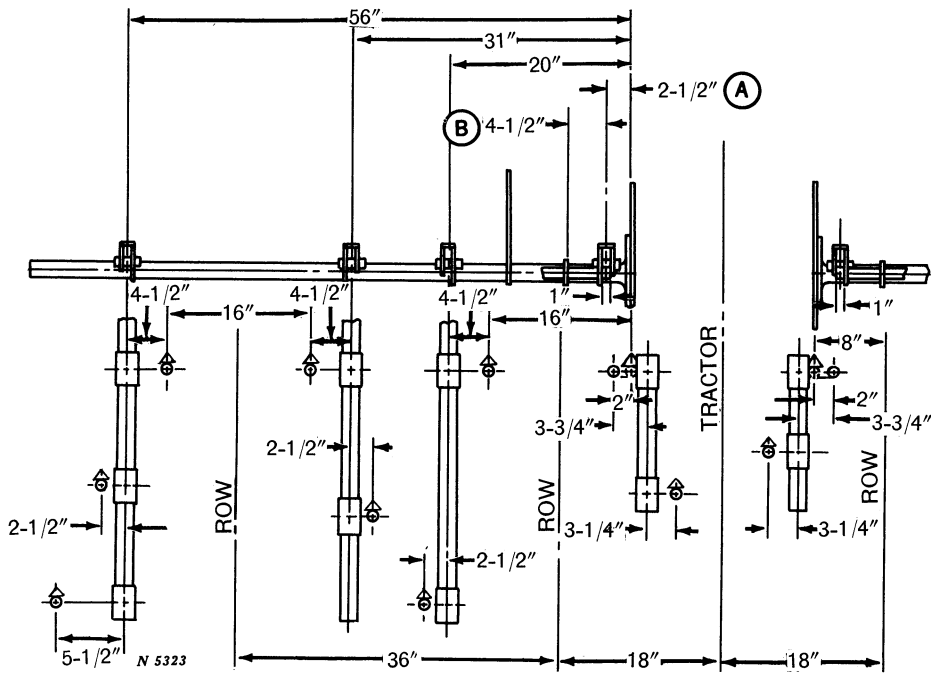
5. Reset the crossarms for the desired row spacing.



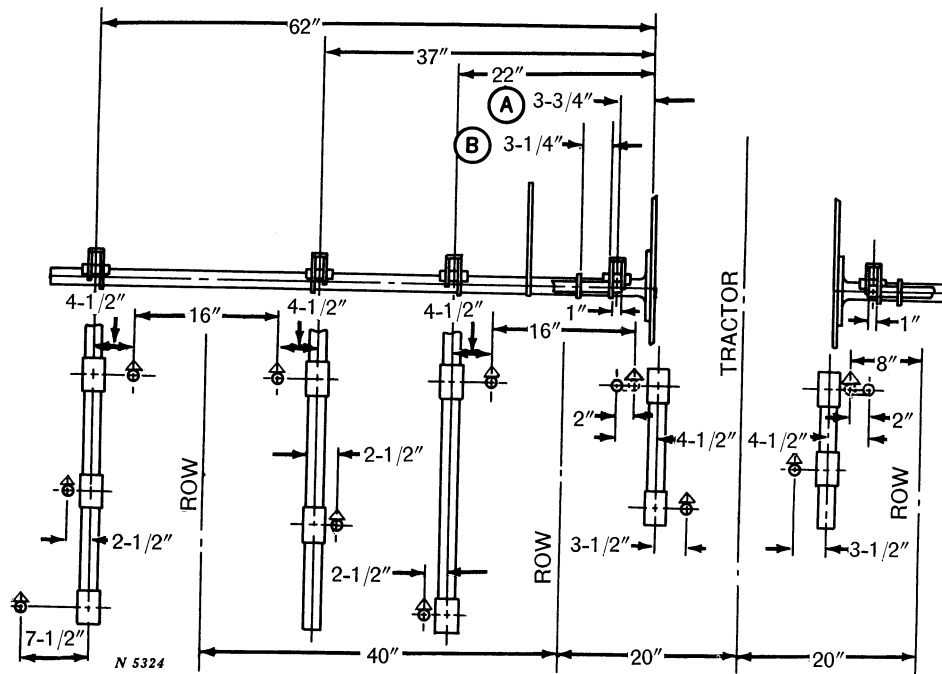
A2 Cultivator Set for 40-Inch Rows



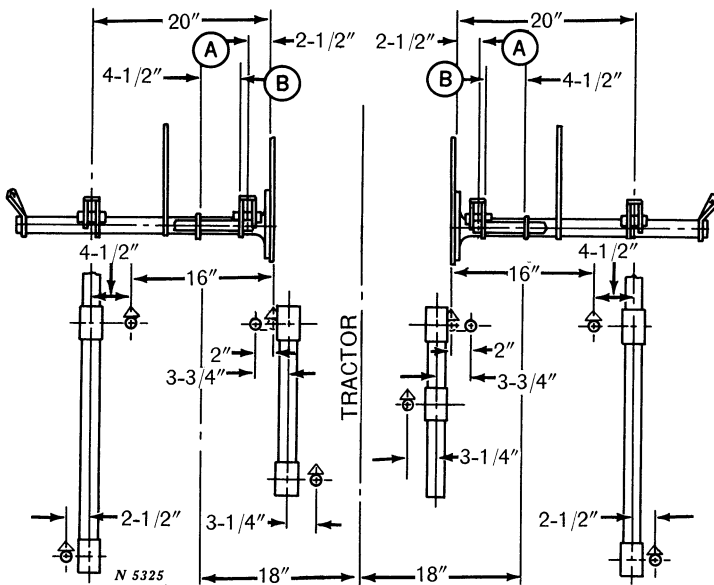
A4 Cultivator Set for 40-Inch Rows



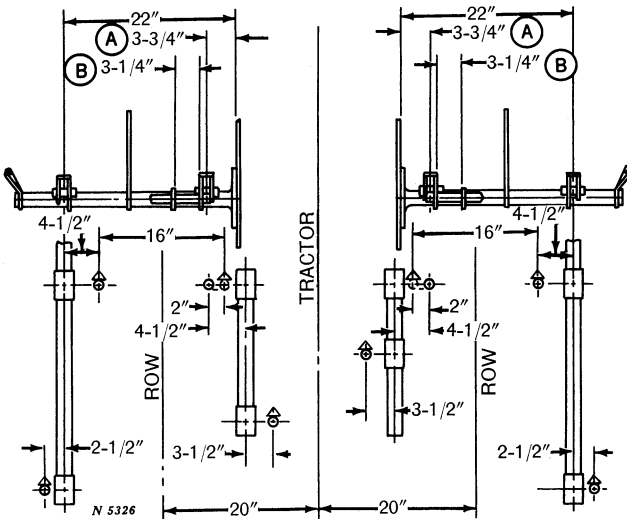
A4 Cultivator Row Spacing Set for 36-Inch Rows



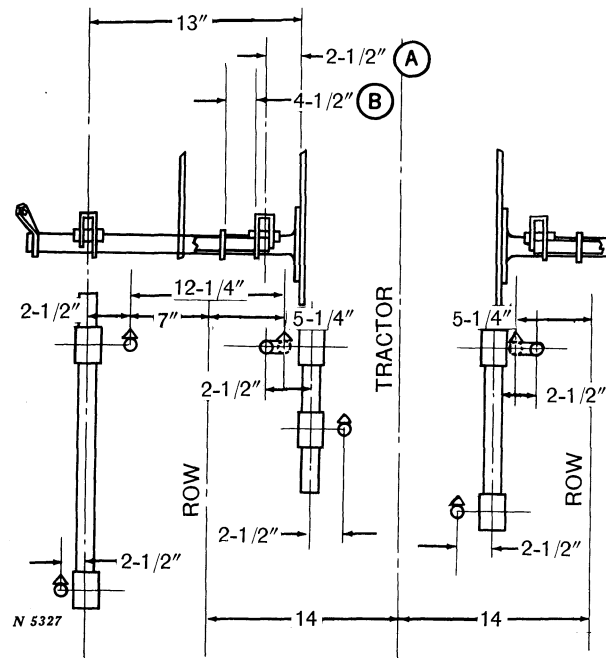
A4 Cultivator Row Spacing Set for 40-Inch Rows



A2 Cultivator Row Spacing Set for 36-Inch Rows



A2 Cultivator Row Spacing Set for 40-Inch Rows



A2 Cultivator Row Spacing Set for 28-Inch Rows

**A Careful Operator
IS THE BEST INSURANCE
AGAINST AN ACCIDENT**

—National Safety Council

Lubrication



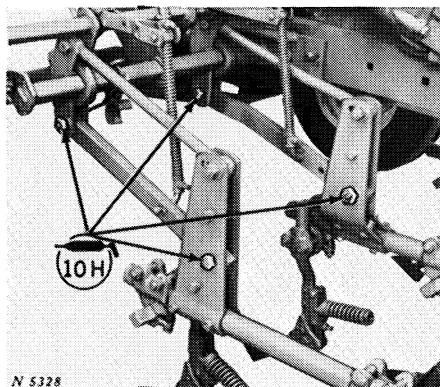
To avoid possible injury and to insure best results always stop tractor operation and lower all units before lubricating the cultivator.

Lubricate moving parts and pivot points. Check to be sure all parts work smoothly. Lubricate grease fittings thoroughly and be sure fittings are firmly installed.

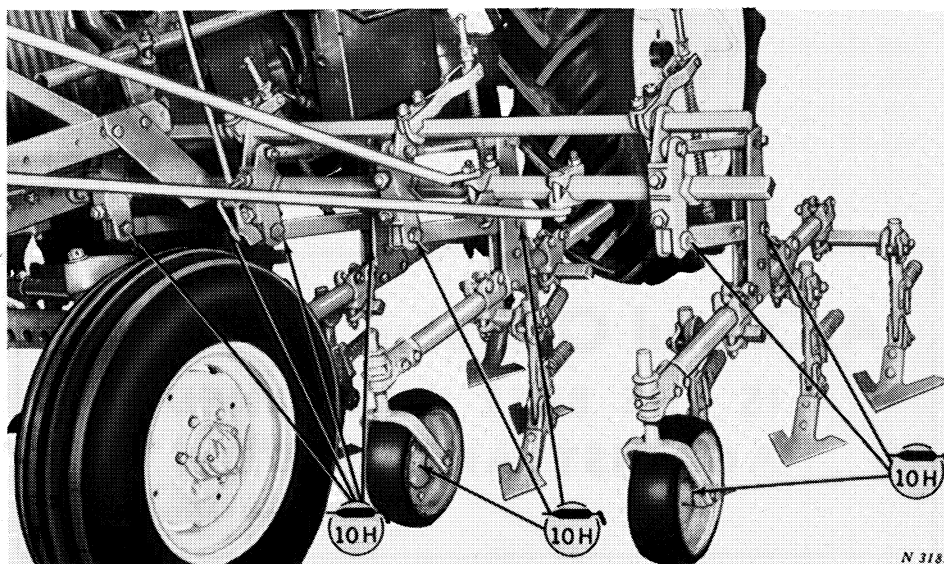
SYMBOL



Lubricate every 10 hours with SAE multi-purpose-type grease.



A2 Cultivator

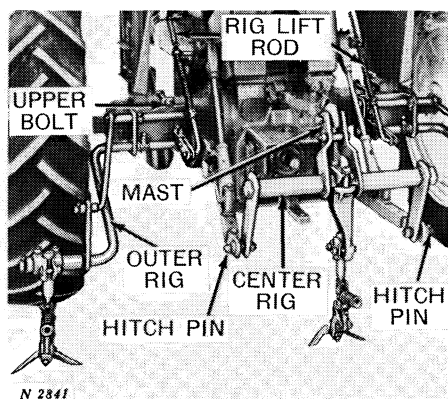


A4 Cultivator

Detaching cultivator from tractor

Rear Rigs

3-Point hitch mounted rear rigs



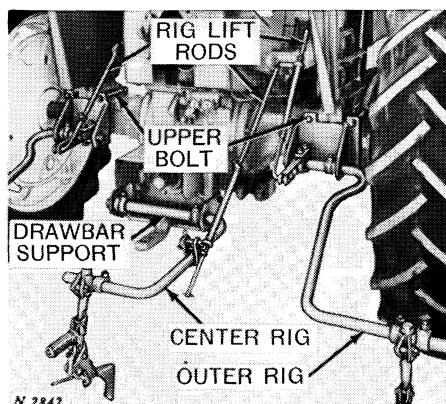
Lower the rear rig to the floor or ground. Disconnect the draft links from the hitch pins and the center link from the mast.

Outer rear rigs

Remove the spring locking pins and disconnect the rig lift rods from the tractor rockshaft lift arms.

Remove the upper bolt and loosen the lower bolt used to attach the outer rigs to the tractor axle housing. Remove outer rigs.

Drawbar mounted center rear rig

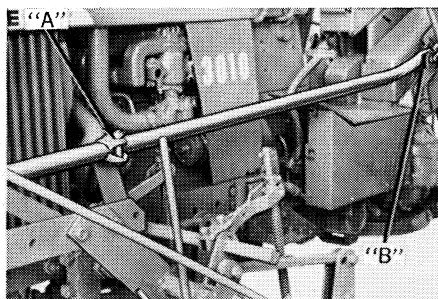


Remove the bolts and drop the center rig from the drawbar support.

Front Rigs

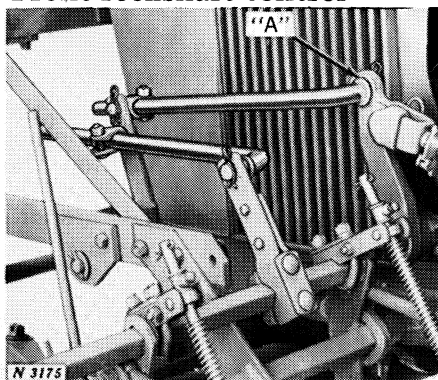
Lower the front rigs on a floor or fairly level surface.

Rear rockshaft control



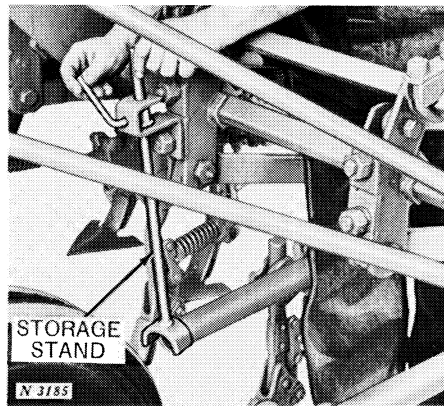
If the cultivator is operated by the rear rockshaft, remove the lift pipes, first at "A" and then at "B."

Front rockshaft control

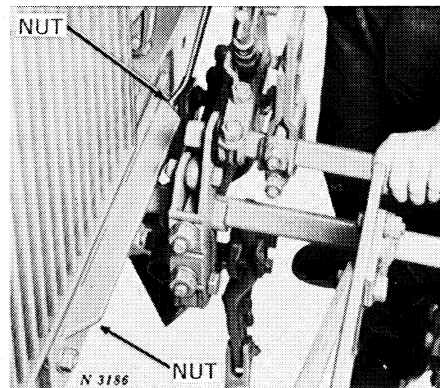


If the cultivator is operated by the front mounted rockshaft, remove the front rockshaft lift rods at "A."

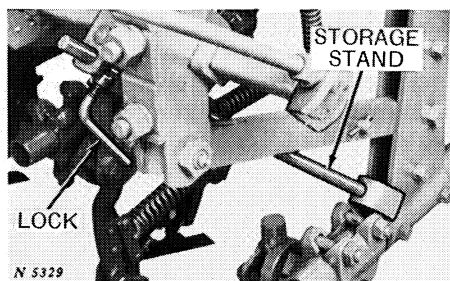
28 *detaching cultivator from tractor*



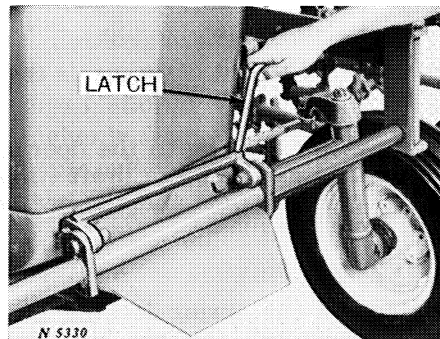
On the A4 Cultivator, lower the storage stands so they contact the rig pipe and tighten lock securely.



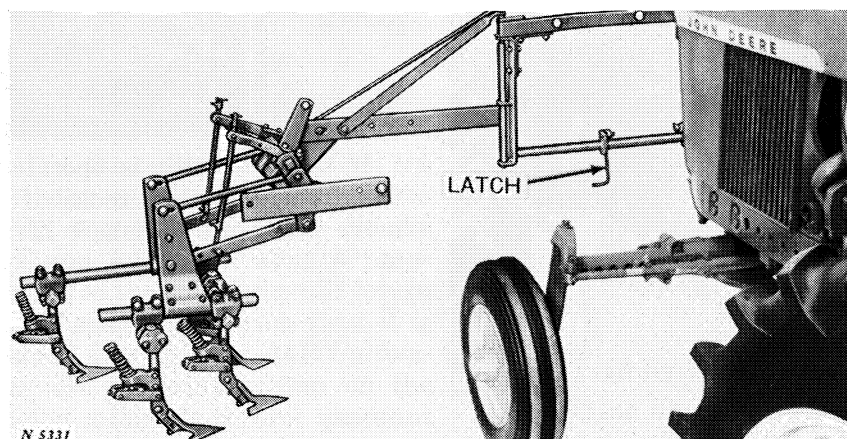
Remove nuts from main frame bolts on both sides of tractor.



On the A2 Cultivator, lower the storage stands until they contact the crossarm clamp. Tighten the lock securely.



With the latch locked in place, as shown, back the tractor until the front rigs swing out far enough to clear the tractor front wheels.

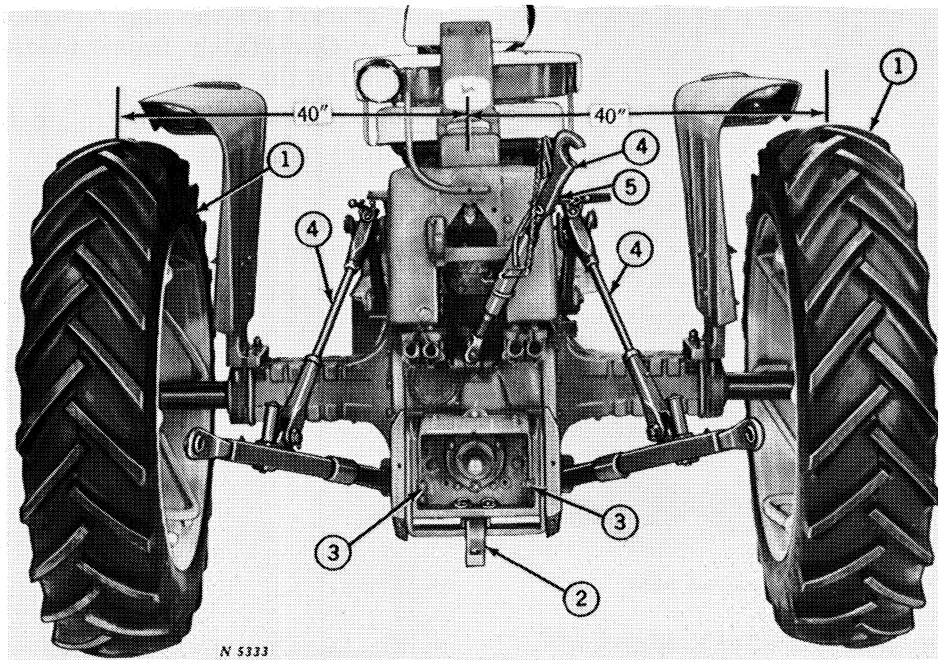


Release the Quik-Tatch latch and back tractor away from cultivator.

The front coupling plate and adapter support bracket can be left on the tractor unless they interfere with other equipment.

Attaching cultivator to tractor

Preparing the Tractor



1. Set the tractor rear wheels for the row spacing desired. The setting shown is for 40-inch rows. See the tractor operator's manual for instructions on adjusting wheel tread.

2. Move the tractor drawbar to the extreme forward position and pin in place with the offset portion of drawbar down. Insert the locking bolts to prevent drawbar from swinging.

3. Sway blocks are required on tractor when using 3-point hitch type rear rigs. Mount the sway blocks in the category 1 position as shown above. See tractor operator's manual.

4. Set the lift links to the proper length. See page 12.

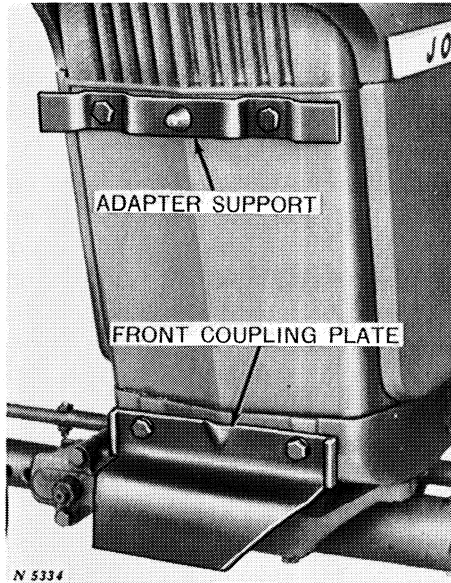
5. On the 3010 and 4010 Tractors, move the load selector lever to the "D" (lower) position.

6. (Not illustrated) Set the tractor front wheel tread eight inches narrower than the crop being cultivated.

EXAMPLE: For 40-inch rows, set the front wheels to 72-inch, instead of 80-inch tread. When adjusting the wheels, remember the spacing must be spaced equidistant from the center of the tractor.

Refer to the tractor operator's manual for operating instructions and the tractor tire inflation pressure.

Front Rigs

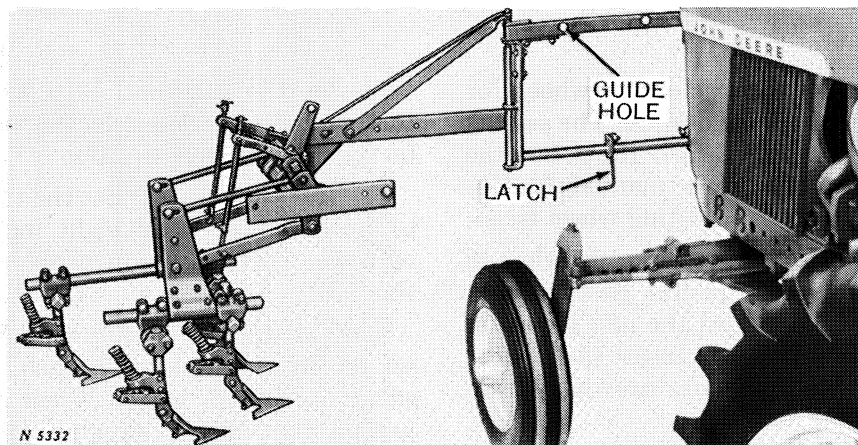


If removed, bolt the adapter support bracket for the upper portion of the Quik-Tatch frame to the pedestal of the tractor.

Bolt the front coupling plate to the front of the tractor.

BE SAFE

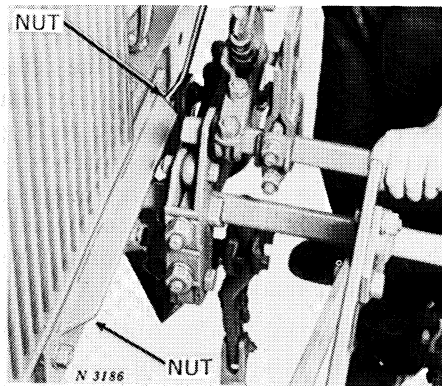
It pays to be careful,
It costs to be careless!



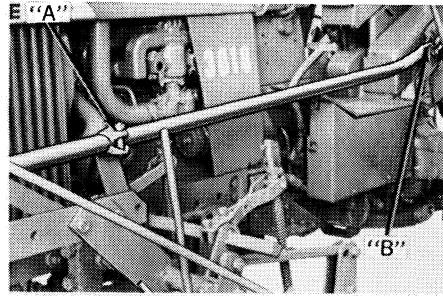
Making sure the latch is in forward position as shown, drive tractor firmly into the cultivator. Use the guide holes in the Quik-Tatch frame to properly line up the culti-

vator with the tractor. Drive tractor forward until the Quik-Tatch frame is seated on coupling plate and the cultivator frames fold back to the tractor frame.

Rear rockshaft control

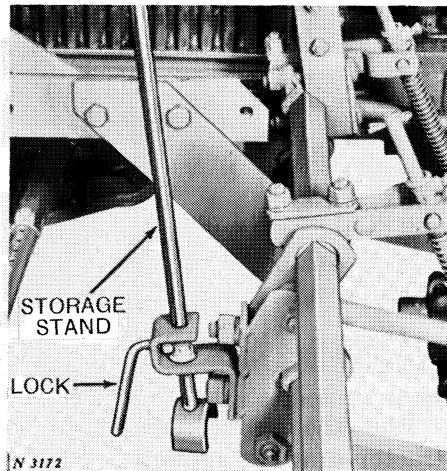


Secure main frames to tractor with bolts and nuts on each side.

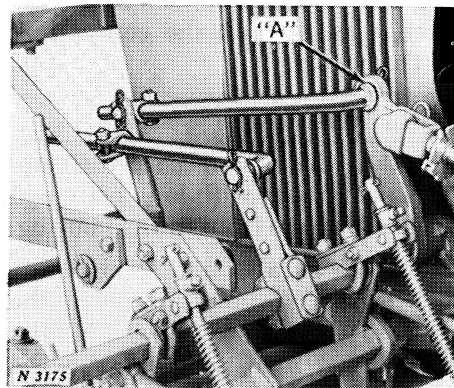


On cultivators controlled by the rear rockshaft, connect the lift pipe to the tractor rockshaft at "B" and then to the cultivator lift arm at "A."

Front rockshaft control



Release and raise storage stands and tighten lock securely.

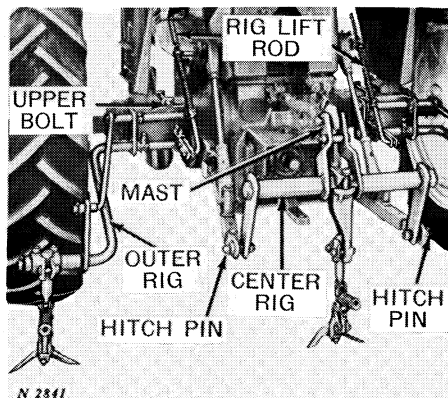


On cultivators controlled by the front mounted rockshaft, connect the lift rod to the front tractor rockshaft as shown above at "A."

Install cylinders and adjust front rockshaft as instructed in your tractor operator's manual.

Rear Rigs

3-Point hitch mounted rear rigs



Connect the draft links to the hitch pins. Attach the center link to the mast.

Outer rear rig

Attach the outer rigs to the tractor axle housing with long bolts and the strap at the front of the housing.

For the parallel and straight lift rear rigs (for standard rows), the bracket locating rods go in the second and fifth notches from the inside of the tractor.

The tractor fender U-bolt for the "A" Series Rear Rigs must be in the fourth notch from the inside as shown above.

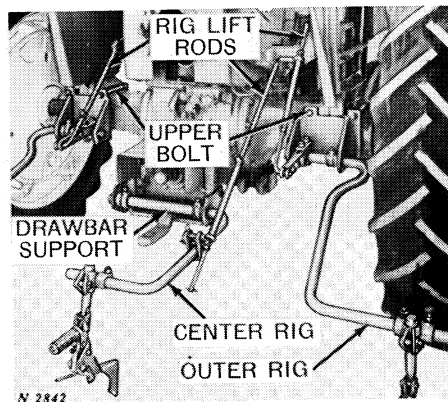
The U-bolt for the "B" Series Rear Rigs must be located in the third notch from the inside.

For 40-inch rows with the offset beam (for standard or narrow rows) rear rigs, the bracket locating rods go in the third and sixth notches on the tractor axle from the inside of the tractor. The tractor fender U-bolt must be in the fourth notch inside.

For 28-inch rows with the offset beam rear rigs (for standard or narrow rows), the rig locating rods go in the first and fourth notches on the tractor axle from the inside of the tractor. The tractor fender U-bolt must be in the second notch from the inside.

Pin the lift rods to the tractor rockshaft arms. The lift rod from the drawbar mounted center rig should be attached to the pin used for the right-hand lift arm.

Drawbar mounted rear rig



Bolt the center rear rig to the tractor drawbar support.

Safety is more than a slogan.
It is an attitude of mind.
and a way of life.

Special equipment

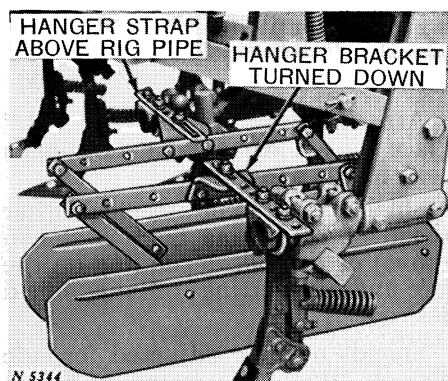
Rig-Mounted Shields

Shields are available as extra equipment and are assembled differently for specific types of fields conditions.

Shield assembly

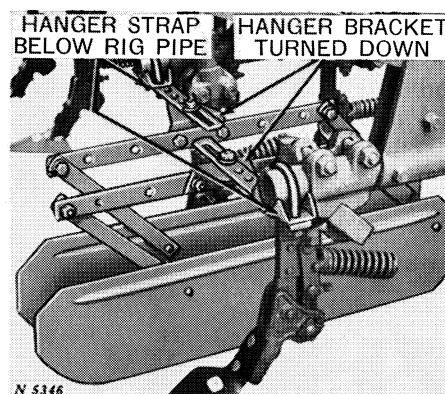
When attaching straps to rig pipes with U-bolts, use attaching holes in straps that will place shields in the best position in relation to the plants. Final adjustment can be made later using slots in inner ends of hanger straps.

Level land



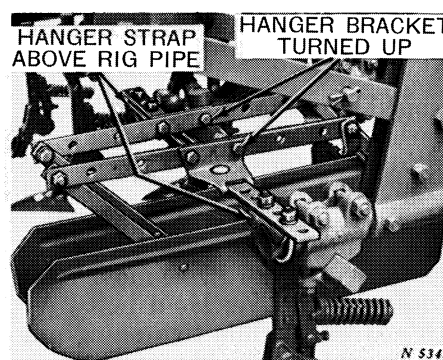
When working in crops planted on level land assemble shield as shown above, with hanger straps above rig pipes and hanger brackets turned down.

Listed Crops



When working in listed crops assemble shields as shown above, with hanger straps below rig pipes and hanger brackets turned down.

Beds

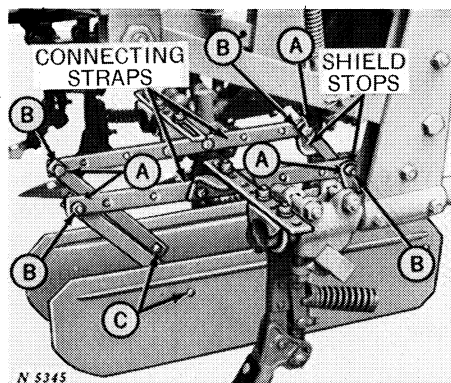


When working in crops planted on beds assemble shields as shown above, with hanger straps above rig pipes and hanger brackets turned up.

Shield adjustment

Flexibility

Bolts "A" are threaded through connecting straps and locked in place with nuts "B." Do not tighten bolts "A" against pivot straps; set them loose enough to allow shields to float up and down freely. Each rivet "C" has a shoulder long enough to reach through the strap and shield. This prevents binding and allows shields to move freely. Be sure there is no bind, at rivets, that would limit the movement of shields.



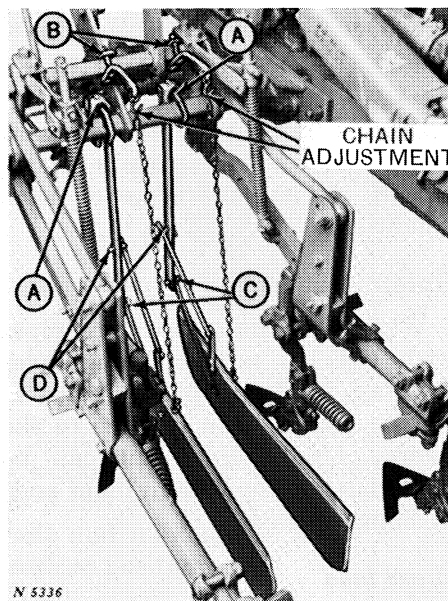
Setting Height of Shields

Shield stops determine the height at which shields are carried, by limiting the forward swing of the rear pivot straps. Stops are mounted on bolts "A" and held by nuts "B." Locate stops after bolts "A" have been adjusted for free movement as described above. Hold bolt "A" with a wrench while tightening nut "B" against the shield stop.

Positioning Shields to Plants

Slide hanger brackets in or out in hanger straps to place shields in proper relation with plants. If further adjustment is needed assemble U-bolts through different holes in straps.

Frame Mounted Shield



Frame-mounted shields may be assembled differently as described below.

Attach shields at "A" and "B." Place the smooth side of the shields next to the shovels.

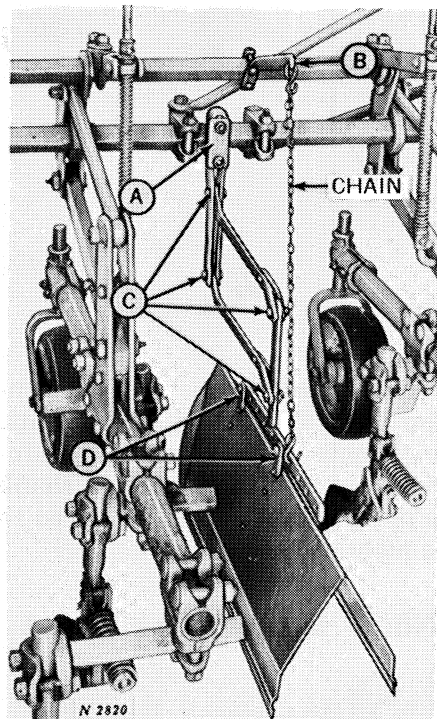
Shield arms can be attached either ahead of the frame bar (as shown above) or behind, depending on the fore-and-aft setting of the shield desired.

Shields may be adjusted for side play at "C." If a swinging shield is desired, loosen bolts until shield swings freely and tighten lock nut. If a rigid shield is desired, screw bolt up tight, then back off 1/2 turn and tighten lock nut.

Level shields by adjusting the threaded eyebolt at "D." Adjust the height of shield with chain.

Be sure all nuts are tight, cotter pins are spread, and all moving joints thoroughly oiled. Then lift the cultivator slowly the first time, checking to see that no parts bind and that everything works properly.

Hooded Shield

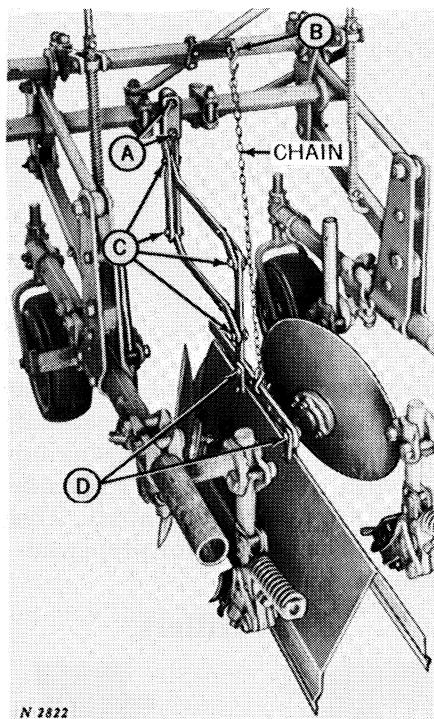


Attach the hooded shields at A and B. The shield arms may be attached either ahead of the frame bar or behind (as shown above), depending on the fore-and-aft setting of the shield desired.

Shields can be adjusted for side play at "C." If a swinging shield is wanted, loosen the bolts until shield swings freely. If rigid shield is desired, screw bolts up tight.

Adjust the shields for fore-and-aft setting by resetting the bolts at "D." Adjust the height of shield with chain.

No. 1 Listed Crop Attachment



Attach the disks to replace the two inside shanks and sweeps. These disks can be turned either in or out (as shown) for hilling or barring off the row.

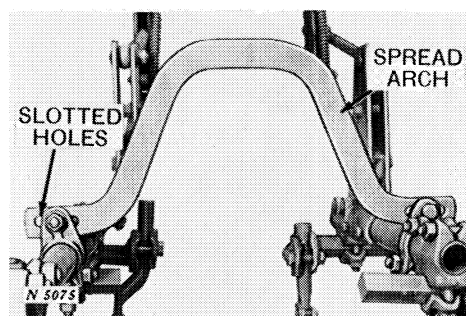
Place the inside shovels across from each other as shown.

Attach the hooded shields at "A" and "B." The shield arms may be attached either ahead of the frame bar or behind (as shown above), depending on the fore-and-aft setting of the shield desired.

Shields can be adjusted for side play at "C." If a swinging shield is desired, loosen the bolts until shield swings freely. If rigid shield is desired, screw bolts up tight.

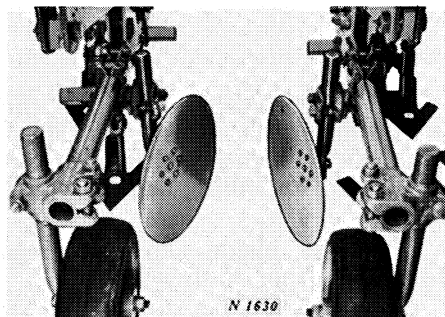
Adjust the shields for fore-and-aft setting by resetting the bolts at "D." Adjust the height of shield with chain.

Spread Arch



The spread arch can be used on the cultivator rigs. It is sometimes desirable for use when throwing up beds with disk hillers. It prevents the rigs from spreading apart. The slotted holes provide for proper adjustment.

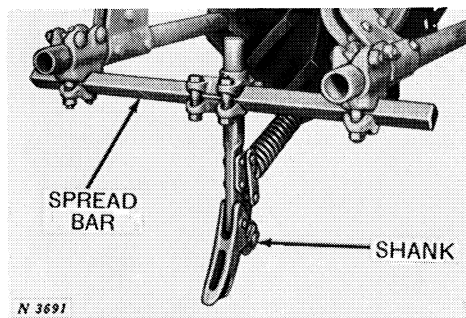
Disk Hillers



Disk hillers can be used next to the rows in place of shovel shanks or spring teeth. One pair is required for each row.

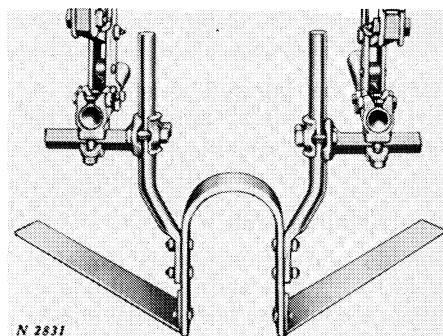
The disks may be used for hilling or barring off the row.

Spread Bar



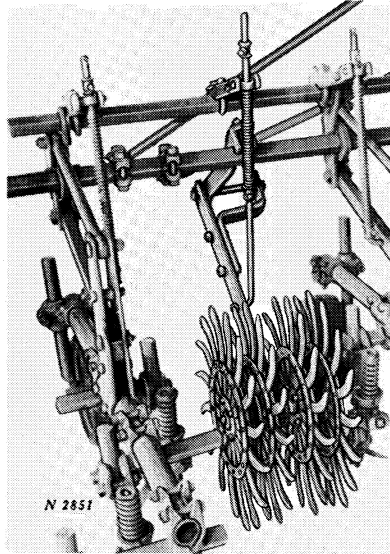
The spread bar is used in connection with planting attachments. A sweep or some type of tool equipment can be attached to the shank to open up a furrow for the seed to be planted.

No. 1 Knife Attachment



The knife attachment can be used where heavy, vine-type weeds are a problem. This attachment speeds cultivation by slicing through trash.

Rotary Hoe Attachment



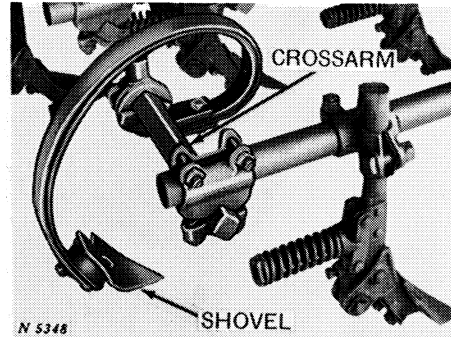
The rotary hoe attachment speeds up cultivating, gets the weeds, breaks crust in the rows, and reduces cultivating costs.

The attachment fits between the cultivator rigs, directly over each row.

The attachment consists of four steel hoe wheels, attached in pairs to white-iron hubs that turn on white-iron spindles. The spindles are securely bolted to a drawbar which is attached to the front frame bar of the cultivator by means of a pivoting attaching bracket.

A lift arm rod with pressure spring completes the assembly. For cultivating after the crop is too high for safe use of the inside wheels, the two inside hoe wheels may be removed from the double hubs by removing three bolts in each wheel. In this manner the wheels act as shields to protect the plants, permitting the cultivator to be driven much faster than otherwise would be practical.

No. 1 Center Attachment



The No. 1 Center Attachment is available for converting the row-type cultivator to a field-type for use in open fields. This attachment is clamped to the pipe of the outside rigs back of the second shovel. The crossarm is adjustable and should be positioned so the shovel of the center attachment cuts out the center left between the two front shovels.

It pays to be careful for your own sake!

Accidents can . . .

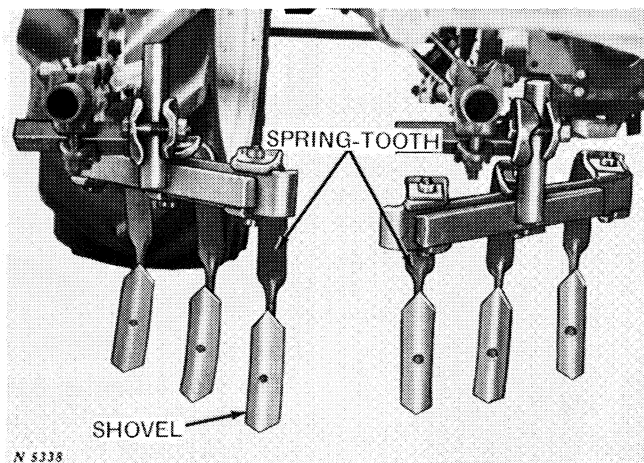
Pain

Lame

Maim

and cost you money!

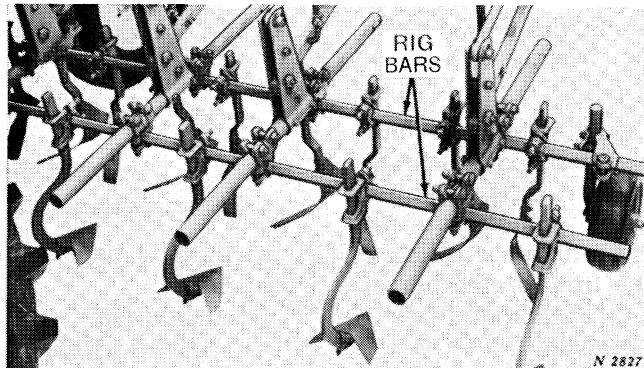
No. 21 Spring-Tooth Attachment



The No. 21 Spring-Tooth Attachment is designed to meet the rements of southern territories.

This attachment consists of a spring-tooth and narrow shovel combination.

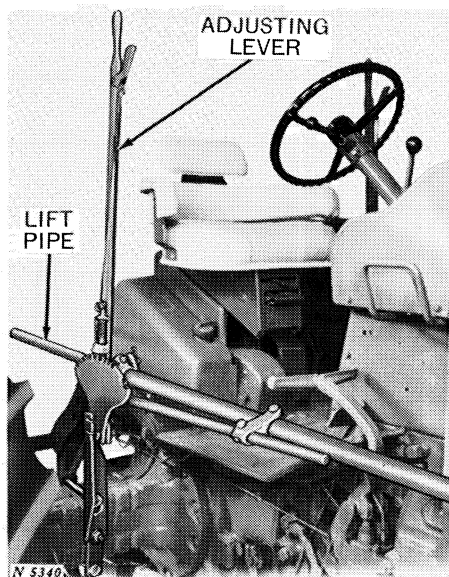
Rig Bars for Vegetable Cultivating



Four square bars can be installed on the cultivator in place of the regular crossarms and shanks to convert this cultivator for vegetable cultivation.

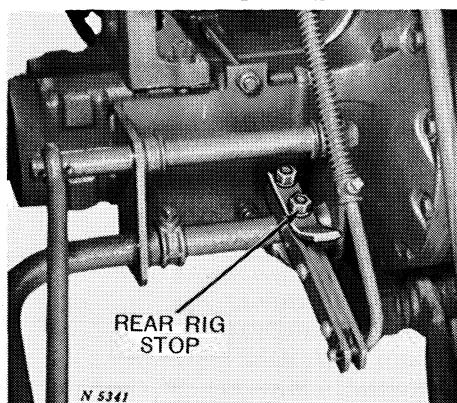
The bars are attached to the rig pipes in the same manner as the spread bar, to which the desired vegetable cultivator standards are attached.

No. 2 Lift Pipe and Adjusting Lever (A2 Cultivator Only)



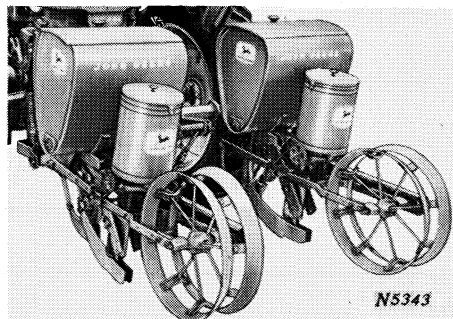
The No. 2 lift pipe and adjusting lever attachment is available for the A2R Cultivator, in place of the regular lift pipes.

Rear rig stops



A rear rig stop is available for the 110A and 120A Series Rear Rigs. This stop prevents possible interference between the rear rig sweeps and large rear tractor tires, especially cane and rice tires.

24B and 25B Unit Planters



With shanks removed, the 50A Rear Rig becomes an ideal hitch-mounted tool bar for 24B and 25B planting and fertilizing units. Both are press-wheel driven, handle drill or hill-drop planting, and may be equipped for dry or liquid fertilizer. John Deere 23R Unit Planters and 70 Series Flexi-Planters also may be used with the 50A Rear Rig.

96E Peanut Puller (A2 Cultivator only)

It is possible to convert your A2 Cultivator into a peanut cutting machine with the 96E Peanut Puller attachment. Large blades cut the peanuts from their roots and deposit the peanuts on the top of the ground for drying.

AB690E and AB690F Bean Harvesters

Either the AB690E two-row or the AB690F four-row bean harvester can be used on the A2 Cultivator. The AB690E can be used for 18 to 42-inch rows. The AB690F can be used for 18- to 36-inch rows.

Large blades cut the beans and the windrow rods deposit them in windrows.

[illegible]



nobody can fill them like you can!

That's what the owner of this pair of work shoes is finding out—hard way. Through a careless action, he has become the victim of an accident. It's a mighty tough way to find out that nobody can fill them like you can. It's a needful lesson to learn that safety is an everyday need.

Put safety into each of your workdays; read the operator's manual thoroughly; know how to operate each machine properly; take the safety precautions specified; think before you act.

Make sure you wear your "shoes" everyday in your safety program now.

As a member of the National Safety Council, you are privileged to use this material to designate not only the importance of safety but also to emphasize and stress the safety cautions in this

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John Deere A2 two-row A4 four-row row-crop cultivators.

